

28-16-28b. Definitions. As used in K.A.R. 28-16-28b through 28-16-28h, each of the following terms shall have the meaning specified in this regulation:

(a) “Alluvial aquifer” means the sediment that is associated with and deposited by a stream and that contains water capable of being produced from a well.

(b) “Alternate low flow” means a low flow value, which is an alternate to the 7Q10 flow, that is based seasonally, hydrologically, or biologically, or a low flow determined through a water assurance district. Wherever used in this regulation in the context of mixing zones, the term shall refer to a minimum amount of streamflow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution and assimilation of wastewater discharges.

(c) “Antidegradation” means the regulatory actions and measures taken to prevent or minimize the lowering of water quality in surface waters of the state, including those streams, lakes, and wetlands in which existing water quality exceeds the level required for maintenance and protection of the existing uses.

(d) “Artificial sources” means sources of pollution that result from human activities and that can be abated by construction of control structures, modification of operating practices, complete restraint of activities, or any combination of these methods.

(e) “Background concentration” means the concentration of any elemental parameter listed in tables 1a, 1b, 1c, and 1d of the “Kansas surface water quality standards: tables of numeric criteria,” which is adopted by reference in K.A.R. 28-16-28e, or any elemental substance meeting the definition of pollutant in this regulation, that occurs in a surface water immediately upstream of a point source or nonpoint source under consideration and is from

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natural sources. The list of background concentration determinations for classified waterbodies of the state is contained in table 1h of the "Kansas surface water quality standards: tables of numeric criteria."

(f) "Base flow" means that portion of a stream's flow contributed by sources of water other than precipitation runoff. Wherever used in this regulation in the context of stream classification, the term shall refer to a ~~fair-weather~~ fair-weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or any combination of these factors.

(g) "Bioaccumulation" means the accumulation of toxic substances in plant or animal tissue through either bioconcentration or biomagnification.

(h) "Bioassessment methods and procedures" means the use of biological methods of assessing surface water quality, including field investigations of aquatic organisms and laboratory or field aquatic toxicity tests.

(i) "Bioconcentration" means the concentration and incorporation of toxic substances into body tissues from ambient sources.

(j) "Biomagnification" means the transport of toxic substances through the food chain through successive cycles of eating and being eaten and through the subsequent accumulation and concentration of these substances in higher-order consumers and predators.

(k) "Biota" means the animal and plant life and other organisms of a given geographical region.

(l) "Carcinogenic" means having the property of inducing the production of cancerous

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cells in organisms.

(m) "Classified surface water" means any surface water or surface water segment that supports or, in the absence of artificial sources of pollution, would support one or more of the designated uses of surface water defined in K.A.R. 28-16-28d or K.S.A. 2017 Supp. 82a-2001, and amendments thereto, and that meets the criteria for classification given in K.A.R. 28-16-28d.

(n) "Compliance schedule" means any provision in a discharge permit, license, or enforceable order issued by the department pursuant to the federal clean water act or K.S.A. 65-165 et seq., and amendments thereto, that, for the purposes of meeting water quality-based effluent limitations, technology-based limits, and effluent limitations determined by the secretary or specified in Kansas statutes and regulations, provides a specified period of time for the construction or renovation of a wastewater treatment facility and the completion of any related scientific or engineering studies, reports, plans, design specifications, or other submittals required by the department.

(o) "Condition of acute toxicity" means any concentration of a toxic substance that exceeds the applicable acute criterion for aquatic life support specified in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds 0.3 acute toxic units (TU_a), where one TU_a is equal to 100 divided by the median lethal concentration (LC₅₀). The concentration at which acute toxicity exists shall be determined through laboratory toxicity tests conducted in accordance with the EPA's "methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms."

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(p) "Condition of chronic toxicity" means any concentration of a toxic substance that exceeds the applicable chronic criterion for aquatic life support specified in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds 1.0 chronic toxic unit (TU_c), where one TU_c is equal to 100 divided by inhibition concentration 25 (IC_{25}). The concentration at which chronic toxicity exists shall be determined through laboratory toxicity tests conducted in accordance with the EPA's "short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms."

(q) "Criterion" means any numerical element or narrative provision that represents an enforceable water quality condition specified in K.A.R. 28-16-28b through 28-16-28h.

(r) "Critical low flow" means the minimum amount of streamflow immediately upstream of a point source discharge that will be used to calculate the quantity of pollutants that the point source discharge may be permitted to discharge without exceeding water quality criteria specified in K.A.R. 28-16-28b through 28-16-28h. The critical low flow may be the 7Q10 flow or the alternate low flow as defined in this regulation.

(s) "Department" means Kansas department of health and environment.

(t) "Designated use" means any of the uses specifically attributed to surface waters of the state in K.A.R. 28-16-28d or K.S.A. 2017-Supp. 82a-2001, and amendments thereto.

(u) "Digression" means an actual ambient concentration of a pollutant that does not meet the numeric criteria value for that pollutant.

(v) "Discharge" means the release of effluent, either directly or indirectly, into surface

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waters of the state.

(w) "Discharge design flow" means either of the following:

(1) The anticipated wastewater flow for the next permit cycle determined by the department for an industrial wastewater treatment facility, as defined in K.A.R. 28-16-56c; or

(2) the wastewater treatment capacity of a facility approved by the secretary for other wastewater treatment facilities or systems.

(x) "Discharger" means a person or facility that is responsible for the release of effluent into surface waters of the state.

(y) "Duration of digression" means the period of time over which pollutant concentrations can be averaged, including the time span during which aquatic life can be exposed to elevated levels of pollutants without harm.

(z) "Ecological integrity" means the natural or unimpaired structure and functioning of an aquatic or terrestrial ecosystem.

(aa) "Effluent" means the sewage or other wastewater discharged from an artificial source.

(bb) "EPA" means United States environmental protection agency.

(cc) "*Escherichia coli*" means a subset of the coliform group that is part of the normal intestinal flora in humans and animals and is a direct indicator of fecal contamination in water.

(dd) "Exceptional state waters" means any of the surface waters or surface water segments that are of remarkable quality or of significant recreational or ecological value, are listed in the surface water register as defined in this regulation, and are afforded the level of

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water quality protection under the antidegradation provisions of K.A.R. 28-16-28c and the mixing zone provisions of K.A.R. 28-16-28c.

(ee) "Excursion from numeric criteria value" means the digression of a pollutant exceeding its numeric criteria value beyond the designated duration of digression.

(ff) "Existing use" means any of the designated uses described in K.A.R. 28-16-28d or K.S.A. 82a-2001, and amendments thereto, known to have occurred in, or to have been made of, a surface water or surface water segment on or after November 28, 1975.

(gg) "Federal clean water act" means the federal water pollution prevention and control act, 33 U.S.C. Section 1251 et seq., as in effect on ~~January 1, 1998~~ January 14, 2019.

(hh) "Frequency of digression" means the number of times that an excursion from numeric criteria value can occur over time without impairing the designated uses of the water.

(ii) "General purpose waters" means any classified surface water that is not classified as an outstanding national resource water or an exceptional state water.

(jj) "Groundwater" means water located under the surface of the land that is or can be the source of supply for wells, springs, or seeps or that is held in aquifers or the soil profile.

(kk) "Highest attainable condition" and "HAC" mean the achievable goal of a variance, ~~according to as specified in~~ K.A.R. 28-16-28f(d)(5), that reflects the modified designated use and criterion, designated use, or criterion that is applicable throughout the term of a variance.

(ll) "Inhibition concentration 25" and "IC₂₅" mean a point estimate of the toxicant concentration that would cause a 25 percent reduction in a nonlethal biological measurement of the test organisms, including reproduction and growth.

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(mm) “Interim criterion” means a temporary criterion.

(nn) “Interim designated use” means a temporary designated use.

(oo) “Kansas antidegradation policy,” dated August 6, 2001 and hereby adopted by reference, means the department’s written policy used to prevent or minimize the lowering of water quality in surface waters of the state.

(pp) “Kansas implementation procedures: surface water quality standards,” including appendix A, “section 4 appendix A,” dated ~~November 29, 2017~~ February 18, 2021 and hereby adopted by reference, means the department’s written procedures used for carrying out specific provisions of surface water quality standards, available upon request from the department’s division of environment.

(qq) “Maximum contaminant level” means any of the enforceable standards for finished drinking water quality specified in 40 C.F.R. 141.11, 141.13, and 141.61 through 141.66, dated as in effect on July 1, 2012.

(rr) “Median lethal concentration” means the concentration of a toxic substance or a mixture of toxic substances calculated to be lethal to 50 percent of the population of test organisms in an acute toxicity test.

(ss) “Microfibers per liter” and “μfibers/L” mean the number of microscopic particles with a length-to-width ratio of 3:1 or greater present in a volume of one liter.

(tt) “Microgram per liter” and “μg/L” mean the concentration of a substance at which one one-millionth of a gram (10^{-6} g) of the substance is present in a volume of one liter.

(uu) “Milligram per liter” and “mg/L” mean the concentration of a substance at which

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one one-thousandth of a gram (10^{-3} g) of the substance is present in a volume of one liter.

(vv) “Mixing zone” means the designated portion of a stream or lake where a discharge is incompletely mixed with the receiving surface water and where, in accordance with K.A.R. 28-16-28e, concentrations of certain pollutants may legally exceed chronic water quality criteria associated with the established designated uses that are applied in most other portions of the receiving surface water.

(ww) “Mutagenic” means having the property of directly or indirectly causing a mutation.

(xx) “Multiple-discharger variance” and “MDV” mean a term-limited variance for more than one discharger that is issued for a specified criterion or pollutant to achieve the highest attainable condition.

(yy) “Nonpoint source” means any activity that is not required to have a national pollutant discharge elimination system permit and that results in the release of pollutants to waters of the state. This release ~~may~~ can result from precipitation runoff, aerial drift and deposition from the air, or the release of subsurface brine or other contaminated groundwaters to surface waters of the state.

(zz) “Numeric criteria value” means any of the values listed in tables 1a, 1b, 1c, 1d, 1g, 1h, 1i, 1j, and 1k of the “Kansas surface water quality standards: tables of numeric criteria.”

(aaa) “Outstanding national resource water” means any of the surface waters or surface water segments of extraordinary recreational or ecological significance identified in the surface water register, as defined this regulation, and afforded the highest level of water quality

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protection under the antidegradation provisions and the mixing zone provisions of K.A.R. 28-16-28c.

(bbb) “pH” means the common logarithm of the reciprocal of the hydrogen ion concentration measured in moles per liter, expressed on a scale that ranges from zero to 14, with values less than seven being more acidic and values greater than seven being more alkaline.

(ccc) “Picrocurie per liter” and “pCi/L” mean a volumetric unit of radioactivity equal to 2.22 nuclear transformations per minute per liter.

(ddd) “Point source” means any discernible, confined, and discrete conveyance from which pollutants are or could be discharged.

(eee) “Pollutant” means any physical, biological, or chemical conditions, substances, or combination of substances released into surface waters of the state that results in surface water pollution, as defined in this regulation.

(fff) “Pollutant minimization plan” and “PMP” mean a structured set of activities to improve processes and pollutant controls that prevent and reduce pollutant levels, including any cost-effective process for reducing pollutant levels, pollution prevention, treatment, best management practices, and other control mechanisms.

(ggg) “Potable water” means water that is suitable for drinking and cooking purposes in terms of both human health and aesthetic considerations.

(hhh) “Precipitation runoff” means the rainwater or the meltwater derived from snow, hail, sleet, or other forms of atmospheric precipitation that flows by gravity over the surface of the land and into streams, lakes, or wetlands.

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(iii) “Presedimentation sludge” means a slurry or suspension of residual solid materials derived from an initial step in the production of potable water. This term shall include residual solids originating from the raw water supply used for industrial or other nonpotable water purposes, before the addition of any artificial materials not typically used in the production of potable water. The solid materials shall include sand, silt, and other easily settleable particles originating from the raw water supply.

(jjj) “Private surface water” means any freshwater reservoir or pond that is both located on and completely bordered by land under common private ownership.

(kkk) “Public swimming area” means either of the following:

(1) Any classified surface water that is posted for swimming by a federal, state, or local government that has jurisdiction over the land adjacent to that particular body of water; or

(2) any privately owned or leased body of water that is open and accessible to the public and is intended for swimming.

(lll) “Reconfiguration activities” means actions that beneficially reshape, remodel, or otherwise restructure the physical setting and characteristics of a surface water of the state.

(mmm) “Seven-day, ten-year low flow” and “7Q10 flow” mean the seven-day average low flow having a recurrence frequency of once in 10 years, as statistically determined from historical flow data. Where used in this regulation in the context of mixing zones, these terms shall refer to the minimum amount of streamflow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution or assimilation of wastewater discharges.

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(nnn) "Site-specific criterion" means any criterion applicable to a given classified surface water segment and developed for the protection of the designated uses of that segment alone.

(ooo) "Streamflow" means the volume of water moving past a stream cross-sectional plane per unit of time.

(ppp) "Surface water pollution" and "pollution" mean any of the following:

(1) Contamination or other alteration of the physical, chemical, or biological properties of the surface waters of the state, including changes in temperature, taste, odor, turbidity, or color of the waters;

(2) discharges of gaseous, liquid, solid, radioactive, microbiological, or other substances into surface waters in a manner that could create a nuisance or render these waters harmful, detrimental, or injurious to any of the following:

(A) Public health, safety, or welfare;

(B) domestic, industrial, agricultural, recreational, or other designated uses; or

(C) livestock, domestic animals, or native or naturalized plant or animal life; or

(3) any discharge that will or is likely to exceed state effluent limitations predicated upon technology-based effluent standards or water quality-based standards.

(qqq) "Surface water register" means a list of the state's major classified surface waters, including a listing of waters recognized as outstanding national resource waters or exceptional state waters, and the surface water use designations for each classified surface water, periodically updated and published by the department pursuant to ~~K.A.R. 28-16-28d and K.A.R. 28-16-28f~~.

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The surface water register, published as the “Kansas surface water register,” is adopted by reference in K.A.R. 28-16-28g.

(rrr) “Surface water segment” means a delineated portion of a stream, lake, or wetland.

(sss) “Surface waters” means the following:

(1) Streams, including rivers, creeks, brooks, sloughs, draws, arroyos, canals, springs, seeps, and cavern streams, and any alluvial aquifers associated with these surface waters;

(2) lakes, including oxbow lakes and other natural lakes and man-made reservoirs, lakes, and ponds; and

(3) wetlands, including swamps, marshes, bogs, and similar areas that are inundated or saturated by surface water or groundwater at a frequency and a duration that are sufficient to support, and under normal circumstances that do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(ttt) “Surface waters of the state” means all surface waters occurring within the borders of the state of Kansas or forming a part of the border between Kansas and one of the adjoining states.

(uuu) “Teratogenic” means having the property of causing abnormalities that originate from impairment of an event that is typical in embryonic or fetal development.

(vvv) “Thirty-day, ten-year low flow” and “30Q10 flow” mean the 30-day average low flow having a recurrence frequency of once in 10 years, as statistically determined from historical flow data. Where used in this regulation in the context of mixing zones, these terms shall refer to the minimum amount of streamflow occurring immediately upstream of a

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wastewater discharge and available, in whole or in part, for dilution or assimilation of wastewater discharges.

(www) “Toxic substance” means any substance that produces deleterious physiological effects in humans, animals, or plants.

(xxx) “Turbidity” means the cloudiness of water as measured by optical methods of nephelometry and expressed in standard nephelometric units.

(yyy) “Use attainability analysis” means a study conducted or accepted by the department that is designed to determine whether or not a surface water or surface water segment supports, or is capable of supporting in the absence of artificial sources of pollution, one or more of the designated uses defined in K.S.A. 2017 ~~Supp.~~ 82a-2001, and amendments thereto.

(zzz) “Variance” means a time-limited designated use and criterion that reflects the highest attainable condition as an alternative to one or more of the criteria specified in K.A.R. 28-16-28e, as implemented by the department in accordance with K.A.R. 28-16-28f.

(aaaa) “Water-effect ratio” and “WER” mean the numerical toxicity, including median lethal concentration and inhibition concentration 25, of a chemical pollutant diluted in water from a given stream, lake, or wetland divided by the numerical toxicity of the same pollutant diluted in laboratory water.

(bbbb) “Water quality certification” means the department's written finding that a proposed action that impacts water quality will comply with the terms and conditions of the Kansas surface water quality standards.

(cccc) “Whole-effluent toxicity limitation” means any restriction imposed by the

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department on the overall acute or chronic toxicity of an effluent discharged to a surface water.

(dddd) "Zone of initial dilution" means the region of a surface water in the immediate vicinity of a discharge where acute and chronic criteria may be exceeded. (Authorized by K.S.A. ~~2017 Supp. 65-171d~~ and ~~K.S.A. 65-171m~~; implementing K.S.A. 65-165, ~~K.S.A. 2017 Supp. 65-171d~~, and K.S.A. 65-171m, and ~~K.S.A. 2017 Supp. 82a-2001~~; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999; amended Nov. 3, 2000; amended Aug. 31, 2001; amended Jan. 3, 2003; amended Oct. 24, 2003; amended Jan. 28, 2005; amended March 20, 2015; amended Feb. 23, 2018; amended P-_____.)

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28-16-28e. Surface water quality criteria. (a) Criteria development guidance. The development of surface water quality criteria for substances not listed in these standards shall be guided by water quality criteria published by the EPA. If the department finds that the criteria listed in this regulation are underprotective or overprotective for a given surface water segment, appropriate site-specific criteria may be developed and applied by the department, in accordance with K.A.R. 28-16-28f, using bioassessment methods or other related scientific procedures, including those procedures consistent with the EPA's "water quality standards handbook," second edition, as published in August 1994, or other department-approved methods.

(b) General criteria for surface waters. The following criteria shall apply to all surface waters, regardless of classification:

(1) Surface waters shall be free, at all times, from the harmful effects of substances that originate from artificial sources of pollution and that produce any public health hazard, nuisance condition, or impairment of a designated use.

(2) Hazardous materials derived from artificial sources, including toxic substances, radioactive isotopes, and infectious microorganisms derived from point sources or nonpoint sources, shall not occur in surface waters at concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife, or aquatic or semiaquatic life.

(3) Surface waters shall be free of all discarded solid materials, including trash, garbage, rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire, and other unwanted or discarded materials. The placement of stone and concrete rubble for bank stabilization shall be acceptable to the department if all other required permits are obtained

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before placement.

(4) Surface waters shall be free of floating debris, scum, foam, froth, and other floating materials directly or indirectly attributable to artificial sources of pollution.

(5) Oil and grease from artificial sources shall not cause any visible film or sheen to form upon the surface of the water or upon submerged substrate or adjoining shorelines, nor shall these materials cause a sludge or emulsion to be deposited beneath the surface of the water or upon the adjoining shorelines.

(6) Surface waters shall be free of deposits of sludge or fine solids attributable to artificial sources of pollution.

(7) Taste-producing and odor-producing substances ~~of~~ from artificial ~~origin~~ sources shall not occur in surface waters at concentrations that interfere with the production of potable water by conventional water treatment processes, that impart an unpalatable flavor to edible aquatic or semiaquatic life or terrestrial wildlife, or that result in noticeable odors in the vicinity of surface waters.

(8) The natural appearance of surface waters shall not be altered by the addition of color-producing or turbidity-producing substances ~~of~~ from artificial ~~origin~~ sources.

(9) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the water quality criteria listed in table 1a of the "Kansas surface water quality standards: tables of numeric criteria," as adopted by reference in subsection (e), the existing water quality shall be maintained, and the newly established numeric criteria shall be the background concentration. Background concentrations shall be

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established using the methods outlined in the “Kansas implementation procedures: surface water quality standards,” as adopted by reference in K.A.R. 28-16-28b, and available upon request from the department.

(c) Application of criteria for designated uses of surface waters.

(1) The numeric criteria in tables 1a, 1b, 1c, and 1d of the “Kansas surface water quality standards: tables of numeric criteria” shall not apply if the critical low flow is less than 0.03 cubic meter per second (1.0 cubic foot per second) for waters designated as expected aquatic life use waters and restricted aquatic life use waters, unless studies conducted or approved by the department show that water present during periods of no flow, or flow below critical low flow, provides important refuges for aquatic life and permits biological recolonization of intermittently flowing segments.

(2) The numeric criteria in tables 1a, 1b, 1c, and 1d of the “Kansas surface water quality standards: tables of numeric criteria” shall not apply if the critical low flow is less than 0.003 cubic meter per second (0.1 cubic foot per second) for waters designated as special aquatic life use waters, unless studies conducted or approved by the department show that water present during periods of no flow, or flow below critical low flow, provides important refuges for aquatic life and permits biological recolonization of intermittently flowing segments.

~~(3) Each digression shall be assessed by the secretary for the purposes of section 303(d) of the federal clean water act, with consideration of acceptable duration and frequency of the digression and representation of actual ambient conditions by environmental monitoring data, as specified in the “Kansas implementation procedures: surface water quality standards.”~~

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(d) Criteria for designated uses of surface waters. The following criteria shall apply to all classified surface waters for the indicated designated uses:

(1) Agricultural water supply use. The water quality criteria for irrigation and livestock watering specified in table 1a of the "Kansas surface water quality standards: tables of numeric criteria" shall not be exceeded outside of mixing zones due to artificial sources of pollution.

(2) Aquatic life support use.

(A) Nutrients. The introduction of plant nutrients into streams, lakes, or wetlands from artificial sources shall be controlled to prevent the accelerated succession or replacement of aquatic biota or the production of undesirable quantities or kinds of aquatic life.

(B) Suspended solids. Suspended solids added to surface waters by artificial sources shall not interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semiaquatic life or terrestrial wildlife. In the application of this provision, suspended solids associated with discharges of presedimentation sludge from water treatment facilities shall be deemed noninjurious to aquatic and semiaquatic life and terrestrial wildlife if these discharges ~~fully meet~~ do not violate the requirements of paragraphs (b)(6) and (8) and paragraph (d)(2)(D).

(C) Temperature.

(i) Heat of ~~from~~ artificial origin ~~sources~~ shall not be added to a surface water in excess of the amount that will raise the temperature of the water beyond the mixing zone more than 3°C above natural conditions. Additionally, a discharge to a receiving water shall not lower the temperature of the water beyond the mixing zone more than 3°C below natural conditions. The

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normal daily and seasonal temperature variations occurring within a surface water before the addition of heated or cooled water ~~of from~~ artificial origin sources shall be maintained.

(ii) Temperature criteria applicable to industrial cooling water recycling reservoirs that meet the requirements for classification specified in K.A.R. 28-16-28d shall be established by the secretary on a case-by-case basis to protect the public health, safety, or the environment.

(D) Toxic substances.

(i) Conditions of acute toxicity shall not occur in classified surface waters outside of zones of initial dilution, nor shall conditions of chronic toxicity occur in classified surface waters outside of mixing zones.

(ii) Acute criteria for the aquatic life support use specified in tables 1a, 1b, and 1c of the “Kansas surface water quality standards: tables of numeric criteria” shall apply beyond the zone of initial dilution. Chronic criteria for the aquatic life support use specified in tables 1a, 1b, and 1d of the “Kansas surface water quality standards: tables of numeric criteria” shall apply beyond the mixing zone.

(iii) If a discharge contains a toxic substance that lacks any published criteria for the aquatic life support use, or if a discharge contains a mixture of toxic substances capable of additive or synergistic interactions, bioassessment methods and procedures shall be specified by the department to establish whole-effluent toxicity limitations that are consistent with paragraph (d)(2)(D)(i).

(3) Domestic water supply use.

(A) Except as provided in paragraph (d)(3)(B), the criteria listed in table 1a of the

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“Kansas surface water quality standards: tables of numeric criteria” for domestic water supply use shall not be exceeded at any point of domestic water supply diversion.

(B) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the domestic water supply criteria listed in table 1a of the “Kansas surface water quality standards: tables of numeric criteria,” due to intrusion of mineralized groundwater, the existing water quality shall be maintained, and the newly established numeric criteria for domestic water supply shall be the background concentration. Background concentrations shall be established using the methods outlined in the “Kansas implementation procedures: surface water quality standards,” ~~available upon request from the department~~ which is adopted in K.A.R. 28-16-28b.

(C) Any substance derived from an artificial source that, alone or in combination with other synthetic or naturally occurring substances, causes toxic, carcinogenic, teratogenic, or mutagenic effects in humans shall be limited to nonharmful concentrations in surface waters. Unless site-specific water quality conditions warrant the promulgation of more protective criteria under the provisions of subsection (a) of this regulation and K.A.R. 28-16-28f, maximum contaminant levels for toxic, carcinogenic, teratogenic, or mutagenic substances specified in 40 C.F.R. 141.11, 141.13, and 141.61 through 141.66, dated as in effect on July 1, 2012, shall be deemed nonharmful.

(D) The introduction of plant nutrients into surface waters designated for domestic water supply use shall be controlled to prevent interference with the production of drinking water.

(4) Food procurement use.

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(A) Criteria listed in table 1a of the “Kansas surface water quality standards: tables of numeric criteria” for food procurement use shall not be exceeded outside of a mixing zone due to any artificial source of pollution.

(B) Substances that can bioaccumulate in the tissues of edible aquatic or semiaquatic life or wildlife through bioconcentration or biomagnification shall be limited in surface waters to concentrations that result in no harm to human consumers of these tissues. For bioaccumulative carcinogens, surface water concentrations corresponding to a cancer risk level of less than 0.000001 (10^{-6}) in human consumers of aquatic or semiaquatic life or wildlife shall be deemed nonharmful by the department and adopted as food procurement criteria. Average rates of tissue consumption and lifetime exposure shall be assumed by the department in the estimation of the cancer risk level.

(5) Groundwater recharge use. In surface waters designated for the groundwater recharge use, water quality shall be such that, at a minimum, degradation of groundwater quality does not occur. Degradation shall include any statistically significant increase in the concentration of any chemical or radiological contaminant or infectious microorganism in groundwater resulting from surface water infiltration or injection.

(6) Industrial water supply use. Surface water quality criteria for industrial water supplies shall be determined by the secretary on a case-by-case basis to protect the public health, safety, or the environment.

(7) Recreational use.

(A) General. The introduction of plant nutrients into surface waters designated for

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primary or secondary contact recreational use shall be controlled to prevent the development of objectionable concentrations of algae or algal by-products or nuisance growths of submersed, floating, or emergent aquatic vegetation.

(B) Primary contact recreation for classified surface waters other than classified stream segments. A single sample maximum or a geometric mean of at least five samples collected during separate 24-hour periods within a 30-day period shall not exceed the criteria in table 1j of the “Kansas surface water quality standards: tables of numeric criteria” beyond the mixing zone.

(C) Secondary contact recreational use for classified surface waters other than classified stream segments. A single sample maximum or a geometric mean of at least five samples collected during separate 24-hour periods within a 30-day period shall not exceed the criteria in table 1j of the “Kansas surface water quality standards: tables of numeric criteria” beyond the mixing zone.

(D) Primary contact recreation for classified stream segments. At least five samples shall be collected during separate 24-hour periods within a 30-day period. A geometric mean analysis of these samples shall not exceed the criteria in table 1i of the “Kansas surface water quality standards: tables of numeric criteria” beyond the mixing zone.

(E) Secondary contact recreation for classified stream segments. The following criteria shall be in effect from January 1 through December 31 of each year:

(i) At least five samples shall be collected during separate 24-hour periods within a 30-day period.

(ii) A geometric mean analysis of the samples specified in paragraph (d)(7)(E)(i) shall not

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exceed the criteria in table 1i of the “Kansas surface water quality standards: tables of numeric criteria” beyond the mixing zone.

(F) Wastewater disinfection. Wastewater effluent shall be disinfected if the department determines that the discharge of nondisinfected wastewater constitutes an actual or potential threat to public health. Situations that constitute an actual or potential threat to public health shall include instances in which there is a reasonable potential for the discharge to exceed the applicable criteria supporting the assigned recreational use designation or if a water body is known or likely to be used for either of the following:

- (i) Primary or secondary contact recreation; or
- (ii) any domestic water supply.

(8) Multiple uses. If a classified stream segment or classified surface water other than a classified stream segment is designated for more than one designated use according to K.A.R. 28-16-28d, the water quality of the classified stream segment or classified surface water other than a classified stream segment shall meet the most stringent of the applicable water quality criteria.

(e) Tables. The numeric criteria for the designated uses of classified surface waters shall be the numeric criteria specified in the department’s “Kansas surface water quality standards: tables of numeric criteria,” dated ~~December 15, 2017~~ March 2, 2021, which is hereby adopted by reference. (Authorized by K.S.A. ~~2017 Supp.~~ 65-171d, K.S.A. 65-171m, and K.S.A. ~~2017 Supp.~~ 82a-2010; implementing K.S.A. ~~2017 Supp.~~ 65-171d, K.S.A. 65-171m, and K.S.A. ~~2017 Supp.~~ 82a-2002, 82a-2003, 82a-2004, and 82a-2010; effective May 1, 1986; amended, T-87-8,

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May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994; amended July 30, 1999; amended
Nov. 3, 2000; amended Aug. 31, 2001; amended Jan. 3, 2003; amended Oct. 24, 2003; amended
Jan. 28, 2005; amended March 20, 2015; amended Feb. 23, 2018; amended

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28-16-28f. Administration of surface water quality standards. (a) Application of modified surface water quality standards. A modification to the surface water quality standards, or the surface water register, or both, shall have no effect on the requirements of any existing enforceable discharge permit issued under K.S.A. 65-165, and amendments thereto, unless the discharge fails to meet the requirements of the permit or the secretary determines that continuation of the discharge will result in a potential or actual public health hazard or in irreversible water use impairments.

(b) Water quality certification. No action identified in this subsection shall be taken unless the department has issued a water quality certification for the following:

(1) Any action requiring a federal license or permit pursuant to the federal clean water act;

(2) any action subject to the permitting provisions of K.S.A. 65-165, and amendments thereto;

(3) any water development project subject to the ~~provisions of~~ water projects environmental coordination act, K.S.A. 82a-325 et seq., and amendments thereto; and

(4) any action undertaken by any Kansas state agency that has a potential water quality impact.

(c) Compliance schedules.

(1) Except as provided in paragraph (c)(2), compliance schedules contained in any discharge permit or license issued by the department pursuant to the federal clean water act or K.S.A. 65-165, and amendments thereto, shall not extend more than ~~three~~ five years beyond the date of permit issuance.

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(2) Compliance schedules ~~of up to five years in total duration~~ extending past the date of permit expiration may be granted if it is demonstrated that the strict application of paragraph (c)(1) is not feasible due to construction scheduling constraints or other technical limitations.

(d) Variances.

(1) A variance establishing an interim designated use and interim criterion may be permitted and adopted into the this article of the department's regulations at the next systematic review or subsequent triennial review and after a public hearing consistent with 40 C.F.R. 131.20(b), dated as in effect on July 1, 2016, if upon written request by any person, as defined by K.S.A. 65-170a and amendments thereto, the secretary finds that the attainment of the designated use and criterion is not feasible because one of the following conditions is met:

(A) One of the factors listed in 40 C.F.R. 131.10(g), as adopted by reference in K.A.R. 28-16-28d(d)(1)(B), exists.

(B) Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented.

(2) Each variance shall be issued and evaluated using methods outlined in the "Kansas implementation procedures: surface water quality standards," as adopted in K.A.R. 28-16-28b.

(3) Adoption and implementation of each variance shall be in accordance with 40 C.F.R. 131.14, dated as in effect on July 1, 2016 and hereby adopted by reference, except that 131.14(a)(2), 131.14(a)(4), 131.14(b)(1)(ii), and 131.14(b)(2)(i)(A) shall be ~~replaced by~~ paragraphs (d)(4) through (d)(6) of this regulation, respectively excluded.

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(4) Each variance shall have a designated term limit and reflect the highest attainable condition during the specified term. A variance may be applied to individual or multiple dischargers or surface water bodies.

(5) Each variance shall have requirements and a time limitation demonstrating the intent that progress be made toward the attainment of the underlying designated use and criterion.

~~(A) Each Kansas surface water quality standard not specifically addressed in a variance shall remain applicable.~~

~~(B) Each person requesting a variance shall provide evidence that a designated use and criterion, or a designated use or criterion, addressed by the variance cannot be achieved solely by the implementation of technology-based effluent limits.~~

~~(C)~~ (A) Each requirement shall ~~represent~~ be designed to achieve the highest attainable condition of the surface water segment applicable throughout the term of the variance. A specified requirement shall not result in lowering the currently attained ambient water quality, unless a variance is necessary for physical reconfiguration activities intended for surface water segment restoration. The highest attainable condition of each affected surface water segment as a quantifiable expression shall be specified as one of the following:

(i) The highest attainable interim criterion;

(ii) the interim effluent condition that reflects the greatest pollutant reduction achievable;

or

(iii) the interim criterion or effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the variance is adopted.

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~~(D)~~ (B) If the quantifiable expression identified in paragraph ~~(d)(5)(C)(iii)~~ (d)(5)(A)(iii) is selected, a pollutant minimization plan ~~consistent with 40 C.F.R. 131.3(p)~~ shall be adopted and implemented by the discharger if no additional feasible pollutant control technology is identified.

(6) Each Kansas surface water quality standard not specifically addressed in a variance shall remain applicable.

(7) Each person requesting a variance shall provide evidence that a designated use and criterion, or a designated use or criterion, addressed by the variance cannot be achieved solely by the implementation of technology-based effluent limits.

~~(6)~~ (8) Each variance request shall include supporting documentation that demonstrates all of the following:

(A) Attaining the designated use and criterion is not feasible throughout the term of the variance because of one of the factors cited in paragraphs (d)(1)(A) and (B).

(B) The term of the variance is only as long as necessary to achieve the highest attainable condition.

(C) The highest attainable condition of the affected surface water segment is as defined in paragraph ~~(d)(5)(C)~~ (d)(5)(A).

~~(7)~~ (9) A discharger that impacts water quality shall not be granted a variance from requirements of K.A.R. 28-16-28c ~~and~~ or 28-16-28e.

~~(8)~~ (10) Specific eligibility requirements may be included in a multiple-discharger variance as an alternative to identifying the specific dischargers at the time of adoption of the variance. Each discharger shall meet the eligibility requirements in the applicable section of the

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“Kansas surface water quality standards variance register,” as adopted by reference in K.A.R. 28-16-28h, to participate in a multiple-discharger variance.

(e) Site-specific criteria. Site-specific criteria shall be established using the methods outlined in the “Kansas implementation procedures: surface water quality standards,” as adopted by reference in K.A.R. 28-16-28b.

(f) Enforcement. Each person deemed by the department to be responsible for a violation of the Kansas surface water quality standards caused by an artificial source of pollution shall be required by the department to initiate corrective actions that restore the designated uses of the affected surface water or surface water segment impaired by the violation and provide for the return of the original surface water quality conditions. (Authorized by K.S.A. 2017 Supp. 65-171d and ~~K.S.A. 65-171m~~; implementing K.S.A. 65-164, ~~K.S.A. 2017 Supp. 65-171d~~, and ~~K.S.A. 65-171m~~; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999; amended Jan. 28, 2005; amended March 20, 2015; amended Feb. 23, 2018; amended

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28-16-28g. Surface water register. The classification and use designations of surface waters of the state shall be those identified in the department's "Kansas surface water register," dated ~~December 12, 2013~~ February 18, 2021, which is hereby adopted by reference. (Authorized by K.S.A. ~~2013-Supp.~~ 82a-2005 and 82a-2010; implementing K.S.A. ~~2013-Supp.~~ 82a-2001, 82a-2002, 82a-2003, 82a2004, and 82a-2005; effective Jan. 28, 2005; amended May 20, 2005; amended Sept. 15, 2006; amended May 25, 2007; amended June 6, 2008; amended Feb. 26, 2010; amended Aug. 5, 2011; amended July 7, 2014; amended P-_____.)

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28-16-28h. Surface water variance register. The variances approved by the secretary shall be those identified in the department's "Kansas surface water quality standards variance register," dated ~~October 31, 2017~~ December 30, 2020, which is hereby adopted by reference. (Authorized by K.S.A. 2017 Supp. 65-171d; implementing K.S.A. ~~2017 Supp.~~ 65-171d and ~~K.S.A.~~ 65-171m; effective Feb. 23, 2018; amended P-_____.)

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